

Listing of claims:

The following listing of claims replaces all previous claim listings in the application:

1. (Currently Amended). A data protection system comprising:

a fileserver configured to contain shares of data and to be connected with a repository,  
wherein the repository is configured to store a replica of a file having:

the fileserver includes:

a filter driver operative to intercept input or output activity initiated by client file requests and further configured to capture a snapshot of a set of the shares of data at a particular point in time and to maintain a list of modified and/or created files since a prior backup last snapshot occurred;

a file system in communication with the filter driver and operative to store client files;

the filter driver is configured to capture the snapshot at a specified time interval based on a backup frequency defined in a protection policy stored in the fileserver

~~a policy cache operative to store a protection policy associated with a set of files;~~

~~a mirror service in communication with the filter driver and with the policy cache;~~  
~~the mirror service operative to prepare modified and created files in the set of files to be written to a repository as specified in the protection policy associated with the set of files;~~

~~a fileserver API coupled to the mirror service and operative to communicate with a repository; and~~

~~a fileserver file transfer module in communication with the file system and operative to transfer files from the file system to at least one repository.~~

2. (Cancelled).

3. (Currently Amended). The system of claim 1, wherein ~~the system~~ the fileserver further comprises:

a location cache ~~in communication with the mirror service and operative~~ configured to determine based on the protection policy indicate which repository will be used to protect each share of data ~~should receive an updated version of an existing file; and~~

a location manager coupled to the location cache and operative to update the location cache when ~~the system~~ the fileserver protects ~~writes a new file share of data in to~~ a specific repository node.

4. (Currently Amended). The system of claim 3, ~~wherein the system~~ further comprising a local repository in communication with the fileserver and having:

a local repository node API adapted for communicating with the fileserver API;

a local repository file transfer module ~~in communication with the fileserver file transfer module and~~ adapted for receiving files from the fileserver file transfer module;

the local repository is further adapted to receive replicated a data mover in ~~communication with the local repository API and operative to supervise a replication of files from the fileserver to the local repository; and~~

the local repository includes a protection policy component in communication ~~with the data mover and operative to determine whether new versions of existing files should be compressed and whether older versions of existing files should be maintained.~~

5. (Currently Amended). The system of claim 4, ~~wherein the system further~~  
comprising:

a remote repository in communication with the local repository and having:

~~a remote repository node API adapted for communicating with the local~~  
repository API;

~~a remote repository file transfer module in communication with the local file~~  
~~transfer module and adapted for receiving files from the local~~ repository file transfer module;

the remote repository is further adapted to receive replicated ~~a data mover in~~  
~~communication with the remote repository API and operative to supervise the replication of files~~  
~~from the local repository to the remote repository; and~~

the remote repository includes a protection policy component in communication  
~~with the data mover and operative to determine whether new versions of existing files should be~~  
compressed and whether older versions of existing files should be maintained.

6. (Currently Amended). The system of claim 1, ~~wherein the protection cache is operative~~  
the fileserver, based on the protection policy, is adapted to define which repositories are used for  
storage of files, how often frequency of data protection occurs backup, how many replicas are  
maintained within each repository, and how modifications to share data are maintained.

7. (Currently Amended). A method for protecting data comprising:  
storing a version of a ~~first~~ file within a set of files on a primary disk storage system;  
capturing a snapshot of the set of files at a particular point in time based on a backup  
frequency defined in a protection policy;

maintaining a list of modified and/or created files since last captured snapshot;  
examining the protection policy associated with the set of files to determine where and  
how to protect files associated with the set of files; and  
replicating the version of the ~~first~~ file to a repository specified by the protection policy,  
wherein the specified repository including at least one of a local repository and ~~at least one a~~  
remote repository.

8. (Currently Amended). The method of claim 7 wherein ~~the version of the first~~ file is  
configured to have at least one the first version.

9. (Currently Amended). The method of claim 8 wherein the method further comprises:  
applying reverse delta compression to ~~successive the~~ versions of the ~~first~~ file when a  
successive as new versions of the file are is stored in the repository.

10. (Currently Amended). The method of claim 9 wherein the step of applying reverse  
delta compression to ~~successive version of the first file~~ comprises  
creating ~~a second another~~ version of the ~~first~~ file, wherein another version of the file is a  
version of the file successive to the version of the file; ~~wherein in response to said creating~~  
replicating the another version of the file into the local repository and the remote  
repository;

replacing the ~~first version of the first file~~ replicated version of the file in the local  
repository with a reverse delta compressed version representing a difference between the ~~first~~

version file and the ~~second another~~ version of the file and replicating ~~the second version~~ in the ~~local repository~~;

transmitting a ~~the reverse delta compressed version difference file~~ to the remote repository; and

in the remote repository, ~~applying-replacing the difference file to the previous prior~~ version of the file with the reverse delta compressed version to store the ~~second another~~ version and ~~a~~ the reverse delta compressed version representing the difference between the first version and the second version.

11. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining the location of repositories and a number of replicas of the files to be stored in ~~for~~ each repository.

12. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining whether to purge a file from a repositories after the file has been deleted from a set of files.

13. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining whether to keep a version historiesy of a file in the set of files.

14. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified backup frequency for a repository.

15. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified type of compression for a file in the set of files.

16. (Currently Amended). The method of claim 7 wherein examining a protection policy associated with the set of files to determine where and how to protect files associated with the set of files comprises:

determining a specified caching level of a repository.

17. (Currently Amended). A data protection system comprising:

a fileserver configured to contain shares of data and to be connected with a repository,  
wherein the repository is configured to store a replica of a file;having:

said fileserver includes:

filter driver means for intercepting input or output activity initiated by client file requests and for capturing a snapshot of a set of the shares of data at a particular point in time and for maintaining a list of modified and/or created files since a ~~prior backup~~ last snapshot occurred;

file system means in communication with the filter driver, the file system means for storing client files;

wherein said filter driver means is configured to capture the snapshot at a specified time interval based on a backup frequency defined in a protection policy stored in the fileserver;

~~policy cache means for storing a protection policy associated with a set of files;~~

~~mirror service means in communication with the filter driver means and with the policy cache means, the mirror service means for preparing modified and created files in the set of files to be written to a repository as specified in the protection policy associated with the set of files.~~

18. (Cancelled).

19. (New). The system of claim 1, wherein said fileserver is configured to

backup said modified files into repositories identified in said protection policy based on said backup frequency; and

store a latest version of a file in a repository where a prior version of said file is stored;

determine a difference between said latest version of said file and said prior version of said file;

apply reverse delta compression to said difference;

replace said prior version of said file with said reverse delta compressed difference between said latest version and said prior version of said file.

20. (New). The system of claim 1, wherein, based in the protection policy, the fileserver is configured to determine the location of repositories and a number of replicas of the files to be stored in each repository.

21. (New). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine whether to purge a file from a repository after the file has been deleted from a set of files.

22. (New). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine whether to keep a version history of a file in the set of files.

23. (New). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified backup frequency for a repository.

24. (New). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified type of compression for a file in the set of files.

25. (New). The system of claim 1, wherein, based on the protection policy, the fileserver is further configured to determine a specified caching level of a repository.



26. (New). The system of claim 17, wherein the fileserver further includes

- backup means for backing up the modified files into repositories identified in the protection policy based on the backup frequency;
- storage means for storing a latest version of a file in a repository where a prior version of the file is stored;
- means for determining a difference between the latest version of the file and the prior version of the file;
- means for applying reverse delta compression of the difference; and
- means for replacing the prior version of the file with the reverse delta compressed difference between the latest version and the prior version of the file.